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THE SCOPE OF SOCIAL TECHNOLOGY.

UNDERSTANDING of the present and direction of the future depend upon knowledge of the past. History treats the phenomena of human life in their process of unfolding. Thus there is a history of the concrete, individual facts of political life; of educational ideals, methods, and systems; of military organization and conflicts; of industry and commerce; of art and religion. Even the history of philosophy, and of economic and political theory, may be named as distinct from the systematic presentation of philosophy, economics, or politics.[1]

Wundt has treated the province of psychology, individual and folk-psychology, philology, history, ethnology, the doctrine of population, politics, economics, jurisprudence, philosophy, and shown their relations to each other.[2]

Economics[3] deals with the phenomena of wealth—that is, of material, transferable, and limited means of satisfying human desires. Grand divisions of economics are theoretical economics and practical economics. Theoretical economics includes statics and dynamics. Practical economics includes economic politics and finance. Already we have treatises on agrarian politics, politics of commerce, manufactures, transportation, the economics of the "labor question," of ecclesiastical institutions, and of educational systems. It is sometimes claimed that there is a particular practical economic science wherever the problem is relatively wide in scope and connected with a natural group of phenomena. The tendency to mark off specialized "sciences" is seen in biology as well as in economics, and there would be more justification for this in sociology because of the greater complexity of the phenomena.

[1] MENGER, *Methode der Socialwissenschaften*, pp. 32, 122.

[2] Compare L. F. WARD, *Outlines of Sociology*, chaps. 1–6; A. W. SMALL, AMERICAN JOURNAL OF SOCIOLOGY, "Seminar Notes," 1898.

[3] J. B. CLARK, *Distribution of Wealth*, p. 1.

In relation to government we have political science, jurisprudence, international law, all of which deal with description, explanation, and adaptation of means to social ends.

The scope, method, and value of general sociology, as science and philosophy, cannot here be discussed. The reply to skeptical questions must finally come from the actual service which the new aspirant renders to the rational and practical demands of the human mind. If it is found that, after the special social sciences — economics, politics, ethics, pedagogics — have done their best work, an entirely different method of treatment of the phenomena of association offers a more adequate, comprehensive, and complete analysis, classification, and explanation of the facts of society, that method will be respected. That a more adequate and complete treatment is desirable no one seems to question; skepticism affects only the achievements of those who have hitherto professed sociology. It may fairly be claimed on behalf of our attempt to construct a general science of society that we are doing only what many economists and political philosophers always do when they seek to satisfy the rational demand for unity and completeness and the practical needs of social organization: they "socialize." If the political philosopher must constantly trespass on the fields of the economist, and the economist follow his own clue out into governmental relations and agencies, and even culture associations, there is justification for an explicit effort to coördinate both factors with other social forces and means when man's estate is in question. The sociologist is doing openly what has long been done actually under titles which do not connote the whole reality.[1]

Our present concern is with practical sociology, and more particularly with the task, divisions, and method of social technology.

I. DIVISIONS OF SOCIAL SCIENCE.

Sociology, as science, deals with what is and with what ought to be. For our present purpose we may divide the entire rational enterprise into theoretical and practical social science.

[1] The eminent economist, Professor G. Schmoller, has recently opened a fairly hospitable door to the waiting candidate by saying that we "dieser Sociologie, die freilich nur eine Art ausgebildeter empirischer Ethik ist, ihr Bürgerrecht in dem Reiche der Wissenschaften nicht mehr abstreiten können" (*Grundriss*, p. 72).

Theoretical social science considers the phenomena of association. Its goal is an adequate view (θεωρεῖν), a knowing and understanding.[1]

The phenomena of community life must be described, that is, set forth in their order of coexistence and succession, relations of space and time. The basis of this task lies in social geography and demography. Description is not complete without the discrimination, classification, and naming of typical forms of the phenomena, since the endless number of individual facts cannot be grasped by the mind without grouping them according to some real characteristic or mark.

The discovery of general tendencies, uniformity of order, is also a discovery of the "laws" of the phenomena.

The culmination and the characteristic of theoretical social science is explanation, rationale, the discovery and statement of the causes of the phenomena. This crowning achievement implies an account of all the conditions and forces which make the phenomenon what it is in kind, degree, and quantity.

This rationale must include a discovery and statement of all the forces which tend to equilibrium, and this may be designated as a problem of static sociology.

The explanation must deal rationally, and as exactly as possible, with the forces which produce change, movement, evolution. This may be called dynamic sociology, or, in a special sense, kinetic sociology.

Practical sociology deals with precisely the same social phenomena, the same typical forms, the same uniformities or laws, the same forces, as theoretical sociology, but for a different purpose, and therefore with some difference of method. Practical social science is ambitious to discover and present in systematic form principles which regulate social conduct in conformity with ends.[2] Does practical sociology deal with what

[1] K. MENGER, *Methode der Socialwissenschaften*, 1883; A. WAGNER, *Politische Oekonomie, Grundlagen*, Vol. I, chap. 1, p. 144; H. DIETZEL, *Theoretische Socialökonomik*, Vol. I, pp. 4 ff.; WUNDT, *Logik, Methodenlehre*, Vol. II, p. 530.

[2] DIETZEL, *o. c.*, p. 4: Conduct, *Handeln* (πράττειν), hence "practice" and "practical." Dietzel (p. 5) distinguishes three tasks of practical social science—normative, critical, and technical; but he would construct only two disciplines or scientific procedures, which he designates ethics (*Ethik*) and politics (*Politik*). Professor

is or with what ought to be? Dietzel's distinction between theoretical and practical economic science is made on the basis of a sharp division between these.

But social technology deals with both: with what exists as a revelation of what ought to be, and of the method of realizing what ought to be. Much of what ought to be is already, as fact; and, at a given moment, most of what ought to be, in relation to the situation. But in the heart of what is there is a suggestion of a better, and a movement toward it; both ends and means being suggested by experience. Social technology deals with this movement, this becoming—its end and way in concrete situations.

II. DIVISIONS OF PRACTICAL SOCIOLOGY.

Within the task of practical social science we may distinguish three problems for systematic treatment: (1) the problem of values, (2) the problem of criticism, and (3) the problem of means. For the first problem we may use the data of ethical science and philosophy, but not without consideration of empirical conditions. The valuation of the ideas of morality is a problem of ethics, aided by psychology. For general sociology the data of ethics and psychology are ultimate elements. But as soon as the valuation includes concrete conditions, external relations of persons to nature and to each other, laws,

A. W. Small distinguishes social telics and social technology. K. Menger calls this practical procedure of social science a doctrine of social art (*Kunstlehre*), but (p. 131) he makes "eine praktische Wissenschaft" synonymous with "eine Kunstlehre." A WAGNER (*o. c.*, p. 145) declares that practical social science is science, and not art alone, so long as it aims at knowledge. "Kurz gesagt, handelt es sich also bei den theoretischen Wissenschaften um Erlangung eines Wissens zum Kennen, bei den praktischen um Erlangung eines solchen zum Können, aber eben um Erlangung eines Wissens um des Wissens Willen doch bei beiden. Auch die letzteren dürfen daher den Namen von 'Wissenschaften' beanspruchen." WUNDT, *Methodenlehre*, Vol. II, p. 532, admits practical social science, as a systematic application of the data of theoretical sciences to the satisfactions of needs; his unnecessary limitation of technology to "politics" does not affect the issue.

In DR. C. D. WRIGHT'S *Practical Sociology* the definition is given of the title: "Any treatment of the subject would be practical which dealt with things as they are." But theoretical social science deals with things as they are, and practical social science, according to the authors quoted above, deals with things as they are, but with a purpose of introducing also what ought to be and is not yet, or only imperfectly, realized.

institutions, then ethical science must wait on theoretical sociology. The debt and obligation are reciprocal, and progress in each science depends on parallel progress of the other. In many books on ethics the writer passes from his own data to dogmatic deductions about social relations and institutions, as if he needed no exact knowledge of these relations and institutions to complete his valuation and make it reliable and verifiable. This is a serious error and entails endless mistakes. The second part of the task, or criticism, implies the application of our criteria to actual conditions as described and explained in theoretical sociology. The third part of the task, or social technology, considers (1) what should be done; (2) how to make or do that which the situation demands. As theoretical social science culminates in explanation of what is, so practical social science culminates in the best methods discoverable, at a given stage of knowledge, for bringing the actual into approximate conformity with what is required by that situation, required by the inherent facts of the situation.[1]

Dependence of practical upon theoretical social science.—From the preceding statement it will be seen that practical social science derives all its data from the description, classification, and explanation furnished by theory. Practical science has no value except as it rests on a mastery of the facts, the laws, and the causes which theory makes known and intelligible.

Dependence of theory upon practice.—Both in life and thought action outruns theory. Men talk and write, logically and beautifully, before logic and grammar. If men had waited for science before they constructed systems of state, industry, and church, there would be nothing to explain. The forces we interpret rose out of the subconscious and the unreflecting life. The principles of conduct are implicit in conduct.

Yet the art of social living is helped by science. General knowledge of financial science might have saved millions of dollars in the cost of the Civil War and the management of currency

[1] "Schliesslich zeigt sie die concreten Mittel, welche taugen, das sociale Sein einer concreten Zeit und eines concretes Ortes mit jener obersten Norm des socialen Seinsollens in Harmonie zu bringen." (DIETZEL, *o. c.*, p. 5.)

since that period. Slavery was long supported, at great loss, on a false economic theory.[1]

III. RELATIONS OF ETHICS TO PRACTICAL SOCIOLOGY.

Psychology reveals the phenomena of the ethical life in all its elements, just as it deals with all the phenomena of intellect, sensibility, and will; it shows the order of awakening and development of the moral sense of obligation, of the commanding ideas of benevolence, justice, and completeness of living. Psychology also brings to light the actual beliefs of men in respect to the virtues and duties, in various relations, which are recognized by men. All the desires of men—the appetites, the æsthetic cravings, the spiritual aspirations, the economic demands—are studied in relation to the central experiences called ethical.

Ethical philosophy seeks the unity of the ethical in the ground of being, the sanctions of the moral sense of oughtness, the ultimate good of beings as defined by hedonism and competing systems.

But at the line where these subjective valuations are tested by experience and come into the current of the social life, ethics is dependent on theoretical sociology, as already indicated, for the knowledge of the institutional forms through which the moral beliefs find expression; and on practical sociology for the concrete means of realization.

With the greatest benevolence no man can be beneficent without knowledge of the actual conditions of realizing satisfactions; and with the finest sense of justice a saint will injure his neighbor in his rights, and all the more remorselessly because he is following his "conscience." The attempt to direct conduct by the light of uninstructed, though noble, sentiments and beliefs has always made communities feel safer in the hands of strong and shrewd selfish men than in the hands of incompetent philanthropists. If anything is certain in morals, it is that every man is under obligations to know all he can about what he has to do.

[1] PAUL LEROY-BEAULIEU, *Traité théorique et pratique d'Économie politique*, Vol. I, pp. 3, 4, second edition, 1896.

IV. THE PRINCIPLES OF PRACTICAL SOCIAL SCIENCE.

By "principles" we do not mean, in this connection, the canons of explanation, for these belong to theory; nor legislative statutes, positive human law; nor divine commands; nor rules of art, made by local administrators for particular direction of specific processes. Positively, we do mean general working directions for conduct, derived from experience, regulative norms for associated action in view of accepted ends.[1]

V. THREE ASPECTS OF SOCIAL TECHNOLOGY.

It is possible to think of a system of principles (1) for the complete organization of a community, small or great, with reference to the attainment of all its ends; (2) of a social technology of a natural group or class of society, a system or mechanism adapted to further in the best possible way all the interests of that group or class, in harmony with the interest of the entire community; or (3) we may select a problem or a movement whose adequate treatment by a special social science is impossible, and demands a coördination and coöperation of many or all the means of the community, and the data of many or all of the special sciences, of nature and spirit.

The first and most ambitious of these projected systems we might be tempted to defer for the present as too visionary and distant for immediate consideration. Yet we may not dismiss it without the suggestion that, approximately, many well-informed and reflective men have, for small communities, achieved this intellectual task. For example, the disciplined and broadly educated head of a household considers all the interests of the members of his family, the relation of their welfare to the interests of neighborhood, city, and all mankind. At the basis of his every command or arrangement is a system of society, rational and as complete as he can think it. All his knowledge of the physical sciences, of economics, politics, ethics, is brought to serve him in the construction of a scheme of group-living.

[1] MENGER, *Methodenlehre*, pp. 245–7, 255. "Die praktischen Wirtschaftswissenschaften sollen uns die Grundsätze lehren, nach welchen die wirtschaftlichen Absichten der Menschen (je nach Massgabe der Verhältnisse) am zweckmässigsten erreicht zu werden vermögen." SCHMOLLER, *Grundriss*, I, p. 64.

We have but to expand this method, based on regulative principles as wide as the moral world, as ancient as civilization, and we have a social technology—a system of conscious and purposeful organization of persons in which every actual, natural social organization finds its true place, and all factors in harmony coöperate to realize an increasing aggregate and better proportions of the "health, wealth, beauty, knowledge, sociability, and rightness" desires.

Indeed, every liberally educated citizen, alive to all the interests about him, constructs in his mind such a rational system in outline for the community in which he lives, and, in less definite form, for the commonwealth and the nation. So far as he acts reflectively, he directs his political, industrial, educational, and ecclesiastical influence according to a more or less consistent body of regulative principles.

In one respect practical sociology is not at a disadvantage compared with theory. Explanation is relative to a given social system, as the "historical" school of economists has rightly urged and all acknowledge.[1]

Regulative principles (*Massregeln*) have precisely the same limitations and scope. But in so far as the same system of conditions, forces, and organization obtains, to the same extent we can discover and present, not only explanatory principles, but also regulative principles. The extreme difficulty and complexity of the problem may well make us careful and painstaking, but never cynically hopeless.

And since many social forces are relatively continuous and permanent, and since there is increasing reciprocity between peoples, we may rationally hope to carry out on a world-scale the principles discovered in very restricted fields of investigation. The chemist and biologist discover in the closet of a laboratory a principle which is published to the learned world, without fear that their conclusions will be put to shame by tests made, under the same conditions, on the other side of the Atlantic. True, we do not in social science deal with such uniform and

[1] *E. g.*, K. BÜCHER, *Entstehung der Volkswirtschaft;* MENGER, *Methode der Socialwissenschaften*, pp. 130 ff.

simple combinations; but the very attempt to construct a social science assumes the reign of law in human life as well as in animal life. Many of our best teachers of politics and ethics introduce their students to Aristotle, Plato, Hobbes, Locke, Machiavelli, and Burke, a pedagogic procedure which would involve loss of time and mental confusion if there were not at least relatively permanent social forces. Judge Hughes pictures to us a modern English undergraduate who is moved to tears by reading Helen's lament over Hector in the closing lines of the *Iliad*. Sophocles has interpreted the deep foundations of law in human nature in language which is as modern as Hooker or Browning. These are facts which are no more legitimately used in explanatory than in regulative science.

VI. DIVISION OF LABOR IN SOCIAL TECHNOLOGY.

A division of labor might be formed on the basis of the characteristic or predominant *desire* or *interest*. Thus, there might be a social technology of the health desire—the *social system* of public sanitation; the wealth desire—the industrial and commercial system; the beauty desire—the organization of communities for art culture; the knowledge desire—the educational system; the sociability desire—the organization for fellowship; the rightness desire—the organization of social control, ethical direction, religion. But I have not been able, thus far, to make it work in detail. Perhaps someone will succeed better with it. In accordance with the principles herewith presented the writer has, for several years, given courses on rural and urban sociology, the domestic institution, and charities, naturally giving far more detailed attention to some subjects than to others.

It may be taken for granted that social technology will make progress only by some kind of specialization. Only by minute division of labor have the sciences of chemistry, physics, biology, politics, and economics achieved their triumphs. This remains true even after we have properly chastised the miserable, petty, and useless following blind alleys which has wasted many student lives. Specialization, on the basis of generous culture, is a

condition of advancing knowledge, even a little way, on firm ground. And specialization involves a parceling out of the territory defined already, with reasonable clearness, in the pioneer and encyclopædic works of such men as Schaeffle and De Greef.

Since there is something distinctive in the task of sociology, it must have a division of labor based on principles inherent in the characteristics of sociology.

A tentative classification of particular tasks is herewith offered for criticism, and this classification is based on a division of labor already in part accepted and fruitful, and which proceeds according to certain groups and classes of persons in modern society.

These groups and classes of persons have already, in most cases, been selected for separate treatment by statisticians, and have been analyzed with great care for the purposes of investigation. They are also recognized by law, and by common speech, as having marks which characterize them.

Over against each of these social groups and classes there is already, in most instances, a body of experts, whose lives are devoted to the study and administration of social organization in relation to this class or group.

These bodies of technical experts have gradually arrived at certain regulative principles, often stated as isolated maxims, but sometimes in systematic and logical forms, and these regulative principles have been subjected to multitudes of severe and prolonged tests.

It seems probable that we may reasonably look in this direction for a division of intellectual labor in the mighty task of reducing to order the fundamental regulative principles of social life.

All that can be presented is a bare outline of the boundaries of some of the projected divisions of scientific labor in this field.

We may begin with the domestic institution, the family. During the last fifty years the learned world has been actively investigating the early and later evolution of the family. The names of Bachofen, McLennan, Morgan, Spencer, Letourneau, Westermarck represent a most important range of studies.

Ancient records, stories of travelers, investigations of ethnologists, minute observation of contemporary nature peoples, have shed a flood of light on the development of the monogamic family as it is known to civilized nations.

Writers on jurisprudence have worked out the legal methods of regulating marriage, personal and property rights of spouses and children. Physiologists and physicians have made profound studies of the physical side of the marriage relation. Economists have collected and exploited the budgets of families. Ethical writers have systematized the traditional beliefs and inherited convictions of modern society in regard to marriage duties and domestic virtues. In short, there is not a science or art which has not made a contribution to what may be called, and is sometimes called, a "domestic science." Yet, a "domestic science," as a branch of social technology, remains to be constructed.

No better example can be chosen to illustrate the helplessness and inadequacy of a special science and its data, so long as those data stand isolated. The politician and legislator cannot draft a law, or an amendment to a law, with wisdom, until he has been taught in some way all the physical, intellectual, æsthetic, economic, ethical, and religious consequences of his statute. The moral and religious teacher is in precisely the same position. The parents, the school boards, the town meeting, the city council, are constantly acting, more or less blindly and instinctively, on the supposition that they know how their measures of discipline or instruction will affect all families in all their interests.

The materials for a division of social technology lie scattered about, and society sorely needs a systematic coördination and construction of them in a coherent body of regulative principles derived from critical investigation, and not from instinct and unreflecting acceptance of traditional beliefs.

A second example may be chosen in that form of community, one of those designated by Professor F. H. Giddings as a "component society," which is called in common speech a "rural community."

The rural community has characteristics which mark it off quite clearly from other forms of association, making all proper allowance for differences in locality and fluctuations and developmental changes. It is relatively homogeneous; each person has a name and a reputation; industry is not highly specialized; education is elementary; the number of impressions and ideas is limited.[1]

In relation to the rural community we may claim that there is a body of experts, and that there is material for a branch of social technology which shall present a system of regulative principles of conduct. In dim and shadowy outlines the rural pastors, teachers, parents, physicians, and local "authorities" have a set of "ethical" maxims which are enforced by stinging criticism, praise and blame, law and constabulary, sermons and church discipline. In isolated sections of knowledge we have some fragmentary basis for this ethical code in the knowledge of physicians, professors in agricultural colleges, agronomes in universities, great organizers of markets; but nowhere, as yet, anything approaching a social technology of the subject, a "rural sociology." We have powerful and learned works on *Agrarwesen* and *Agrarpolitik*, which on examination reveal a reliable and indispensable mastery of economico-political relations of rural populations, but furnish little help as to the social organization to secure the ultimate, highest, and essentially human goods of being. When men of science once apprehend the vastness of this neglected field, they will bring to it the same acumen, patience, and method which have won worthy triumphs in the production of wealth. Granting that the economic basis must first be laid firmly, may we not now insist that a part of scientific labor be drafted off into other fields of research? We actually have more and better books on breeding cattle and marketing corn than on forming citizens and organizing culture. Is it not worth while to attempt a social technology of the rural community? And would not even a failure in the attempt be worthy of respect?

The third example chosen is another "component society,"

[1] See S. M. PATTEN, *Theory of Social Forces.*

a social group which contains within itself, as does the family and the rural community, all the elements necessary to existence — the urban community. Here again we find the three necessary factors for a particular branch of science — the natural group, the body of experts, the materials of knowledge in the special sciences and in the maxims of experts.

And here we discover that the title "municipal sociology" has already become current in common speech. It is manifest that the city cannot, for its guidance, use the isolated results of sanitary science apart from administration, or of pedagogics apart from municipal finance, or of æsthetic science apart from museums and art commissions, or of ethics apart from the technical tests of conduct in every relation and situation. It is evident to editors and to all others who are trying to create and educate a genuine "municipal patriotism," a common judgment of policy, common will as to all that should be done for health and culture, for all citizens by all citizens, that social technology is at this crisis essential. And there are men and women of large brains and resources, outside of university lecture-rooms, who are honestly working at this task. Able editorials are not economic or political discussions, but sociologial in the meaning of the word here employed.

Of the other "component societies" which might furnish materials for similar branches of social technology it is not possible to write within the limits of this article: the people of a commonwealth, the people of a nation, and — in a far distant future — mankind. Wildest speculation will long lure us toward these grand subjects, but the social technology of humanity must wait until we test our methodical tools on more limited subjects. There is already a science of the state, theoretical and practical, which rests on an implicit general sociology and leads on to a social technology of the nation.[1]

But there are certain social classes, secondary products of evolution, which may become the subjects of systematic treatment in social technology. In some instances, under various names, precisely this task has been fairly well advanced. The

[1] See RATZENHOFER, *Wesen und Zweck der Politik.*

"classes" to be named are found in all the "component societies" mentioned above. In case of the classes to be cited we have again three factors of a social technology—a natural group already investigated statistically, a body of experts representing the best judgments of normal social members, and a growing and consistent set of regulative maxims for community dealings with the class.

Without going into many details we may designate some of these classes and the name of a branch of social technology already recognized as a legitimate field for scientific specialization.

Thus society has long been compelled to recognize and distinguish the antisocial or criminal class. The criminal anthropologists and psychologists have devoted immense labor to minute and protracted studies of the criminal traits and character physical and psychical. Jurisprudence devotes to this class a vast literature of criminal law and procedure, which of late is profoundly influenced by studies of the criminal himself, and of sociology in general. Penologists have formed associations, national and international, for a careful investigation of the methods of treatment of all classes of offenders, in prison and elsewhere, with a view to their welfare and the good of the entire community, contemporary and future.

One of the men who have studied our American system of reformatories presented to the last International Prison Congress a long and able paper whose central plea was for a sociological treatment of the subject, since the methods of economics, jurisprudence, and prison science, taken separately, break down in detail before a closely and logically connected system can be constructed.[1]

We already have works written from this point of view.[2]

The dependents are also recognized as a class by the statisticians, and the numbers of the various subclasses have been counted in the census. The biological, medical, economic, and

[1] PROFESSOR W. MITTERMAIER, Heidelberg, *Bulletin de la Commission pénitentiaire international*, 4e série, liv. III, 1900, Vol. III, p. 465.

[2] FERRI, *Criminal Sociology;* W. D. MORRISON, *Juvenile Offenders.*

legal aspects of dependence have long been studied, and a mass of information has been accumulated. In addition to this a distinct discipline has grown out of the demand for a more comprehensive and adequate treatment of the whole system of charity. It has gone so far as to require a name, and, out of deference to scientific custom, a learned Greek compound has been offered for criticism—charitology. In the few text-books[1] thus far written to present in systematic form the causes of dependence and the regulative principles which direct the most successful methods in philanthropy, the sociological standpoint has been distinctly adopted, the chapter on the subject in economics having proved wholly inadequate.

The group of industrials or wage-workers has been clearly differentiated as a complex class in modern society. This process of differentiation has been due to advances in technique, to the division of labor in industry, the rise of cities, and the resulting geographical and cultural separation of the operatives from the managers. The antagonisms, hatred, and friction incident to this separation have aroused the solicitous attention of statesmen, economists, and ethical philosophers. The conditions of life and culture in this group offer a fairly well-defined field for a branch of social technology. The economists have already erected a discipline which some of them call "social economics" and others simply "the labor question" (*die Arbeiterfrage*), or "the social question." But no thinking man can rest satisfied with a purely economic, or even economico-legal, treatment of the interests of this large group and the interests of society in their welfare. While we insist that the economic and legal factors must be worked out by experts in economics and jurisprudence, we must also insist that, side by side with them, all other social factors must be considered, and that the difficult task of harmonizing all data of special experts must be in fact, if not in name, a branch of social technology.

In a similar way we might study the artist group, the professional class, the salaried officers of corporations and governments,

[1] A. G. WARNER, *American Charities;* C. R. HENDERSON, *Introduction to the Study of Dependents, Defectives and Delinquents* (second edition in preparation).

and the business managers or *entrepreneurs;* and the "social question" involved in their conduct, their example, their expenditure, their morals, their social use and culture, is quite as vital as that involved in the study of the industrials or the criminals. Professor Veblen's *Theory of the Leisure Classes* and Charles Dudley Warner's *Little Journey in the World* may make this clear to anyone whose eyes are not dazzled by the glitter of diamonds.

VII. METHODOLOGY OF SPECIAL "PROBLEMS" IN SOCIAL TECHNOLOGY—NEW AND UNSOLVED QUESTIONS.

Life makes problems of the most difficult and pressing kind· There is no end of subjects for doctor's theses in our field, and we are not driven to set tasks whose issues are in vacuity. In every community, however small, the people feel the weight of uncertainty and grope for the light. Not seldom they turn to the university for help. Tolstoi's wandering criticisms may be fanatical, but he is not entirely unjust in asking whether the social sciences may not be made to contribute more directly and consciously to the betterment of man's estate.

Public interest, as indicated by the headlines of newspapers, is usually concentrated on very few "paramount issues" at a time, and moves rhythmically back and forth from one to another. Now it is an outburst of burglary and holdups at the onset of frosty weather; now an election, a lynching, a crash in the market, a battle, a tornado. At such a moment the study of a lifetime is in demand to still the feverish curiosity of an hour.

There are topics which become acutely interesting to the public at frequent intervals, and which take almost complete possession of many persons all their lives. This is true, for example, of the labor question, temperance reform, relief of the poor, criminal treatment, currency, and education.

Social technology can render its best service by dealing with genuine social problems in vital connection with a body of knowledge and a system of principles. The statement, location, and analysis of a situation are made comprehensive, and the facts which are essential for a judgment are arrayed in an intelligible form for the use of administrators, voters, and

reformers. A particular problem is always a part of a larger view, and its solution must be found by bringing it into the light of organized bodies of knowledge. Some of the important steps in the process of dealing with a particular problem may here be indicated.

There must be a clear statement of the problem as a community interest, and it must be a genuine social problem if it belongs fairly to the sociologist. We have many studies of vast interest to society which are properly economical, administrative, or educational. A problem in social technology has at least these marks; all the elements of welfare are involved; all the members of the community are affected; and the data to be used are normally derived from more special sciences. If the answer can be supplied by an expert in any particular field of science or experience, the problem may be left there. State troops are not called out if the constable or sheriff is able to meet the occasion.

The *end* of proposed social action must be defined with all clearness; the kind of good to be furthered or multiplied; the satisfactions to be attained.

The third step is a clear and complete arrangement of all the causal relations and conditions in the situation. At this point the dependence of technology on theoretical science becomes apparent. In a social problem, in the sense defined, the full explanation can never be given by any one special science, and the explanation must be through a process of sociological thinking.

The fourth step is the study or presentation of methods actually in use to attain the proposed end, of their failures and success, and of the regulative principles involved in the most favorable cases.

The fifth step is a mental construction of the most rational plan for the next step. This is based on all the preceding stages of experience and is suggested by them. This new proposition corresponds to the hypothesis in theory.

The sixth step is trial, and the Anglo-Saxon conservative plan of gradual approach is found to be thoroughly scientific.

We have here an analogy with experiment and unification in biology, even to vivisection. For this very reason, since the experiment must be tried on large groups of sentient persons, both prudence and humanity require caution.

The fifth and the sixth steps can be taken only by men who are actually dealing with some field of administration, or who are in very close and confidential relations with the men of technique. For it cannot too often be reiterated and emphasized that regulative principles are in life, are discovered by purposeful effort, and must remain unknown to those who are ignorant of actual experience.

The working hypothesis is constantly improved through the "dialectic" of experience, imagination, reasoning, and more experience.

We may consider the familiar "temperance problem" in order to illustrate the application of the method proposed. It will be understood that the facts are summarized, without the support of statistical material or statements of authorities.[1]

We have in the temperance question a true social problem, a community interest. The evils of intemperance affect all citizens. Not one individual can escape the burden of taxation, the dangers to life, property, and morals, incident to the liquor traffic. All interests of all citizens are affected. Health is involved, directly and indirectly. Inebriates transmit and communicate disease; frighten the weak and timid; drive their wives to misery. Economically the effects are seen in the destruction of food materials to manufacture alcohol, in the reduction of industrial efficiency of workmen, in the increase of loss by fire and fraud, in the cost for pauperism and crime. Æsthetic life suffers in many and most obvious ways. Educational progress is checked, and teachers are ill paid, while brewers roll in wealth at cost of the laborers. The impulses of fellowship are perverted and debased. The man of truth and honor becomes a liar and a beggar, his moral nature falling fatally with the organic changes in his brain caused by alcohol.

[1] Many of the recent statistics are given in C. D. WRIGHT, *Practical Sociology*, with references to sources.

The complete mastery of this subject cannot be compassed without deriving data from the fields of many specialists in the fields of biology, economics, jurisprudence, administration, ethics, psychiatry. The statistical investigation alone is an enormous task.

The end.—No progress can be expected unless the community foresees with clearness what it wants to accomplish. Nor is it sufficient to agree that we desire to promote the virtue of temperance. Ancient systems of ethics have admitted self-control among the cardinal qualities of good character, and there is no controversy over this vague claim. But the moment we attempt to define the conduct of the temperate man in society we are compelled to collect evidence, for we are met with radical differences of opinion, and many communities are divided. This controversy among the people is mainly due to conflict of medical authority. There can be no final agreement as to social aims until the physicians find common ground, until the experts can tell us how much alcohol can be imbibed without danger, and with advantage to health, under the various conditions of age, sex, financial ability, climate, occupation. An unsettled problem in medicine and physiology is unsettled in social ethics.

We can count on sufficient agreement for a basis of community action in respect to excess and certain manifestly improper and injurious uses of alcoholic beverages; and we can make plans with hope of success so far as authority has reached a conclusion. Individuals may have for themselves a more austere, perhaps a higher ideal, but they cannot hope to make this a social aim in the present conflict of expert opinion.

Causal conditions.—Intemperance, defined as an excessive and improper use of alcoholic drinks by large classes of the community, is the phenomenon to be explained. We have to do with a social custom and its effects.

The procedure of the Committee of Fifty is an illustration of the influence of sociology in modern methods of attacking a social problem, and its investigations are both theoretical and practical, in the sense of the words used in this paper. They

attempt to consider (1) the physiological questions involved; (2) the economic aspects; (3) the ethical aspects; (4) legislation. Perhaps other sides will be studied. It is certain that at the conclusion of the special investigations a survey of the entire evidence will be necessary in order to show the bearing of each particle of evidence in relation to every other, and to bring out the cumulative force of the facts. To marshal the most instructive and convincing facts which explain the appetite for stimulants and the social customs which grow out of it would be to repeat a large part of the contents of such volumes.

The fourth step is the study of past and present social methods of dealing with the problem of intemperance, and especially with the liquor traffic.

By an inductive process we may array all the conscious efforts of communities to secure customary conformity to the ideal of self-control, moderation in the use of alcoholic stimulants. This investigation would present an impartial survey of (1) the hortative method, or "moral suasion" movement, of moderates and total abstainers, represented by Father Matthew and John B. Gough; (2) the various methods of legal control—license, high tax, mulct, and prohibitive laws, the dispensary and Norwegian systems, and others; (3) the educational method—teaching in schools, lectures, publications; (4) the influence of modern machinery and organization of industry—the discharge of employés of railroads for drinking or resorting to saloons; (5) the discipline of social criticism and example; (6) the influence of the church and ministry; (7) the labors of associations, temperance societies; (8) the indirect influence of general improvements, as better housing, sanitation, recreations, athletics, baths, public comfort stations.

From this investigation of actual methods and their results we may derive regulative principles. The study of causes reveals the motives which induce men to drink and drink to excess: weariness, exhaustion, discomfort at home, sociability of saloons, fashion, idleness, narrow range of interests.

The survey of all the means which have actually succeeded,

in some measure, in mitigating, and, in some cases, removing, the evils of intemperance brings up into clear consciousness this law: that the temperance reform is simply a part of the whole process of social pedagogics; that it cannot be promoted apart from the other movements toward the whole good of all society. We are thus forced to the conclusion that the fundamental regulative principle is: "Elevate the race at once." The effective means for mitigating the evils of drink are precisely those which are involved in a wise charity, a wise prison reform, a wise housing movement, a wise educational system for all classes, a wise economic movement.

The construction of a program of temperance reform.—According to the conclusion just stated—assuming that it would be reached by investigation—a rational program of temperance reform is nothing more nor less than a system of social pedagogics, which embraces all the ends of education, all the means of moral training and discipline, all the community means of control and direction; but which also assigns to different persons and associations a definite task in the program, as each man in an orchestra must play the instrument he knows, but with relation to what others are doing at the same time and in the rendering of the same complex composition.

The program of temperance reform, to use an analogy drawn from medical practice, may include a general tonic treatment for the constitution and also specific medication for particular symptoms. Among specific measures those mentioned above are all applicable, each in adaptation to needs and surroundings.

The experiment.—The trial of our hypothesis of practice is going forward in all European countries and in all the states of the United States. The function of social technology is to give intellectual organization to this experiment; to make it part of a rational system; to distinguish between special local conditions and general laws of conduct, and thus give the wisest direction to the application of the regulative rules.

The temperance question may be studied on any scale, and very modest ability may become useful if it applies a large and

comprehensive method within a narrow territory. On a state or national scale great financial resources are required; but the study of a village, a ward, a district, may be done thoroughly well by a private student, and the results will be valuable to check or verify the results reached by the larger scheme.[1]

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[1] MELENDY, "Study of the Saloon in Chicago," in the AMERICAN JOURNAL OF SOCIOLOGY, November, 1900, and in the present number, may illustrate this point.